

IN THE CLAIMS:

1.-20 (Cancelled).

Claim 21 has been amended as follows:

21. (Currently amended) An implantable medical apparatus for detecting diastolic heart failure (DHF), comprising:

a workload detector configured to interact with a subject to detect a current workload of the subject;

a pressure measuring unit ~~adapted~~ configured to interact with ~~[[a]]~~ the subject to measure pulse pressure, as a blood pressure parameter, in a cardiac cycle ~~for a predetermined~~ at said current workload situation of the subject, said pressure measuring unit emitting a pulse pressure signal indicative of said magnitude pulse pressure; and

a comparator supplied with said pulse pressure signal that compares said magnitude of pulse pressure with a predetermined reference value that has a predetermined association with said current workload as a DHF predictor to produce a comparison result indicative of DHF state of the heart of the subject.

Claim 22 has been amended as follows:

22. (Currently amended) An apparatus as claimed in claim 21 wherein said pressure measuring unit also ~~is adapted to measure~~ measures said magnitude of pulse pressure in a cardiac cycle for a rest situation of the subject as determined by said workload detector, and comprising a difference former that forms a difference between said magnitude of pulse pressure for said current ~~predetermined workload situation~~ and said magnitude of pulse pressure for said rest

situation of the subject, and wherein said comparator compares said difference to said reference value to obtain said comparison result.

Claim 23 has been amended as follows:

23. (Currently amended) An apparatus as claimed in claim 21 ~~comprising~~ wherein said workload detector comprises an activity sensor that detects an activity level of the subject and emits an activity signal representing said activity level, and a workload calculator supplied with said activity signal that determines ~~[[a]]~~ said current workload of the subject from said activity signal.

Claim 24 has been amended as follows:

24. (Currently amended) An apparatus as claimed in claim 21 wherein said pressure measuring unit measures said magnitude of pulse pressure during a plurality of cardiac cycles, and comprising an averaging unit that forms an average value of the magnitude of pulse pressure measured during said plurality of cardiac cycles, and wherein said comparator compares said average value with said predetermined reference value to obtain said comparison result.

25. (Previously presented) An apparatus as claimed in claim 21 comprising a wireless communication unit connected to said comparator that automatically wirelessly transmits said comparison result to an external receiver.

26. (Previously presented) An apparatus as claimed in claim 21 comprising a memory connected to said comparator that stores said comparison result.

Claim 27 has been amended as follows:

27. (Currently amended) An apparatus as claimed in claim 21 wherein said pressure measuring unit comprises a pressure sensor ~~adapted~~ configured for placement at a location selected from the group consisting of the right ventricle of the heart of the subject and coronary veins of the heart of the subject.

Claim 28 has been amended as follows:

28. (Currently amended) An apparatus as claimed in claim 21 wherein said pressure measuring unit measures a maximum of said magnitude of pulse pressure.

Claim 29 has been amended as follows:

29. (Currently amended) An apparatus as claimed in claim 21 wherein said pressure measuring unit measures a minimum of said magnitude of pulse pressure.

Claim 30 has been amended as follows:

30. (Currently amended) An apparatus as claimed in claim 21 wherein said pressure measuring unit comprises a sensor ~~for delivering~~ that emits photo-plethysmographic signals ~~for determining~~ representing said magnitude of pulse pressure.

Claim 31 has been amended as follows:

31. (New) An implantable cardiac pacemaker comprising:
a diastolic heart failure (DHF) determining device comprising a workload detector configured to interact with a subject to detect a current workload of the subject;

a pressure measuring unit ~~adapted~~ configured to interact with ~~[[a]]~~ the subject to measure a magnitude of pulse pressure, as a blood pressure parameter, in a cardiac cycle for a ~~predetermined~~ said current workload ~~situation~~ of the subject, said pressure measuring unit emitting a pulse pressure signal indicative of said magnitude of pulse pressure, and a comparator supplied with said pulse pressure signal that compares said magnitude of pulse pressure with a predetermined reference value that has a predetermined association with said current workload as a DHF predictor to produce a comparison result indicative of a DHF state of the heart of the subject; and

a therapy administration unit ~~adapted~~ configured to interact with the heart of the subject to administer electrical cardiac therapy to the heart, said therapy administration unit being connected to said DHF determining device and being supplied with said comparison result therefrom, and administering said electrical cardiac therapy dependent on said comparison result.

Claim 32 has been amended as follows:

32. (Currently amended) A pacemaker as claimed in claim 30 ~~comprising~~ wherein said workload detector comprises an activity sensor that detects an activity level of the subject and emits an activity signal representing said activity level, and a workload calculator supplied with said activity signal that determines ~~[[a]]~~ said current workload of the subject from said activity signal.

Claim 33 has been amended as follows:

33. (Currently amended) A pacemaker as claimed in claim 32 wherein said pressure measuring unit comprises a pressure sensor that measures said magnitude of pulse pressure, and wherein said pressure sensor also forms said activity sensor.

Claim 34 has been amended as follows:

34. (Currently amended) A method for detecting diastolic heart failure (DHF), comprising the steps of:

determining a current workload of a subject;

measuring a magnitude of a pulse pressure in vivo, as a blood pressure parameter, in a cardiac cycle of ~~[[a]]~~ the subject for ~~a predetermined~~ said current workload situation of the subject; and

electronically comparing said magnitude of pulse pressure with a predetermined reference value that has a predetermined association with said current workload as a DHF predictor to produce an electronic comparison result indicative of a DHF state of the heart of the subject.

Claim 35 has been amended as follows:

35. (Currently amended) A method as claimed in claim 34 comprising also measuring said magnitude of pulse pressure in a cardiac cycle for a rest situation of the subject, and electronically forming a difference between said magnitude of pulse pressure for said ~~predetermined~~ current workload situation and said magnitude of pulse pressure for said rest situation of the subject, and wherein

the step of comparing comprises comparing said difference to said reference value to obtain said comparison result.

Claim 36 has been amended as follows:

36. (New) A method as claimed in claim 34 comprising measuring said magnitude of pulse pressure during a plurality of cardiac cycles, and electronically forming an average value of the pulse pressure measured during said plurality of cardiac cycles, and wherein the step of comparing comprises comparing said average value with said predetermined reference value to obtain said comparison result.

37. (Previously presented) A method as claimed in claim 34 comprising automatically wirelessly transmitting said comparison result to an external receiver.

Claim 38 has been amended as follows:

38. (Currently amended) A method as claimed in claim 34 comprising measuring said magnitude of pulse pressure using a pressure sensor placed at a location selected from the group consisting of the right ventricle of the heart of the subject and coronary veins of the heart of the subject.

Claim 39 has been amended as follows:

39. (Currently amended) A method as claimed in claim 34 wherein the step of measuring said magnitude of pulse pressure comprises measuring a maximum of said magnitude of pulse pressure.

Claim 40 has been amended as follows:

40. (Currently amended) A method as claimed in claim 34 wherein the steps of measuring said magnitude of pulse pressure comprises measuring a minimum of said magnitude of pulse pressure.

Claim 41 has been amended as follows:

41. (Currently amended) An apparatus as claimed in claim 34 wherein the step of measuring said magnitude of pulse pressure comprises measuring said magnitude of pulse pressure using a sensor that ~~delivers~~ emits photo-plethysmographic signals representing said magnitude of pulse pressure.

Claim 42 has been amended as follows:

42. (Currently amended) A method as claimed in claim 34 comprising determining said magnitude of pulse pressure during said ~~predetermined~~ current workload situation of the subject at a time when the subject is not suffering from DHF, and determining said reference value from said magnitude of pulse pressure for said ~~predetermined~~ current workload ~~situation~~ when the subject is not suffering from DHF.